

Notice of Allowability

Application No.

09/440,148

Examiner

Thai D Hoang

Applicant(s)

HOU ET AL.

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 06/17/2004.
2. ☒ The allowed claim(s) is/are Claims 9-13,23-24,26,25,27,33,37-39 and 43-45 have been renumbered as 1-17 respectively.
3. ☒ The drawings filed on 15 November 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

Claims 9-13, 23-24, 26, 25, 27, 33, 37-39, 43-45 have been renumbered as 1-17 respectively

Claims 1-17 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

De la Salle US Patent No. 6,144,961 discloses a method and system for non-intrusive measurement of transaction response times on a network. De la Salle does not teach or fairly suggest the following features, which are recited in each independent claim of the present application:

(a) A metrics server in an intranet comprising:

a network interface device configured to non-intrusively measure network traffic 9933393transferred in and out of an intranet for at least one connection, the at least one connection being a logical path from a specific source to a specific destination, the intranet being a network accessible only by authorized users;

a processor coupled to the network interface device and configured to generate performance metrics for a predetermined measurement time interval using the measured network traffic for the at least one connection;

wherein the at least one connection is delimited by a first packet from the specific source to the specific destination and a last packet from the specific source to the specific destination;

wherein the specific source is identified by a source Internet Protocol address in the first packet and the specific destination is identified by a destination Internet Protocol address in the first packet for the at least one connection;

wherein the network interface device is further configured to filter the measured network traffic such that only header information contained within the packets being transferred are captured by the network interface device;

further comprising a memory coupled to the network interface device and the memory stores the measured network traffic;

wherein the memory further stores an active connection table containing entries for the at least one connection that is active during the predetermined measurement time interval and an entry is deleted from memory when the at least one connection for the entry is inactive when the predetermined measurement time interval expires; and

wherein the processor is further configured to update the active connection table based on the measured network traffic and the predetermined measurement time interval as recited in claim 1.

(b) A metrics server in an intranet comprising:

a network interface device configured to non-intrusively measure network traffic transferred in and out of an intranet for least one connection, the at least one connection being a logical path from a specific source to a specific destination;

a processor coupled to the network interface device and configured generate performance metrics for a predetermined measurement time interval using the measured network traffic for the at least one connection;

wherein the at least one connection is delimited by a first packet from the specific source to the specific destination and a last packet from the specific source to the specific destination;

wherein the specific source is identified by a source Internet Protocol address in the first packet and the specific destination is identified by a destination Internet Protocol address in the first packet for the at least one connection;

wherein the specific source is the metrics server and the specific destination is at least one client outside the intranet and the measured network traffic includes packets being transferred between the metrics server and the at least one client;

wherein the network interface device is further configured to filter the measured network traffic such that only header information contained within packets being transferred are captured by the network interface device;

a memory coupled to the network interface device and the memory stores the measured network traffic; wherein the memory further stores an active connection table containing entries for the at least one connection that is active during the predetermined measurement time interval;

wherein the processor is further configured to update the active connection table based on the measured network traffic and the predetermined measurement time interval;

wherein the processor is further configured to accumulate the performance metrics generated for the at least one connection that extends pass the predetermined measurement time interval;

wherein the processor configured to generate performance metrics includes the determination of source and destination Internet Protocol addresses and timestamp information of the packets captured within the predetermined measurement time interval; and

wherein the predetermined measurement time interval is one minute as recited in claim 4.

(c) A measurement infrastructure comprising:

a plurality clients outside an intranet, the intranet being a network accessible only by authorized users;

a first metrics server inside the intranet coupled to the plurality of clients and configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured;

wherein the network traffic measured by the first metrics server includes packets being transferred for at least one first connection, the least one first connection being a logical path from the first metrics server to one the plurality clients outside the intranet;

wherein the performance metrics generated by the first metrics server is for a predetermined measurement time interval using the measured network traffic for the at least one first connection;

further comprising a second metrics server that configured to non-intrusively measure network traffic being transferred and out of the intranet and to generate performance metrics based on the network traffic measured;

wherein the network traffic measured by the second metrics server includes packets being transferred for at least one second connection, the at least one second connection being a logical path from the second metrics server to one of the plurality of clients outside the intranet;

wherein the performance metrics generated by the second metrics server is for a predetermined measurement time interval using the measured network traffic for the at least one second connection; and

wherein the first metrics server distributes performance metrics generated by the first metrics server to the second metrics server in the intranet as recited in claim 6.

(d) A measurement infrastructure comprising

a plurality of clients outside an intranet;

a first metrics server inside the intranet coupled to the plurality of clients and configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured;

wherein the network traffic measured by the first metrics server includes packets being transferred for at least one first connection, the at least one first connection being a logical path from the first metrics server to one of the plurality of clients outside the intranet;

wherein the performance metrics generated by the first metrics server is for a predetermined measurement time interval using the measured network traffic for the at least one first connection;

a second metrics server that is configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured;

wherein the network traffic measured by the second metrics server includes packets being transferred for at least one second connection, the at least one second connection being a logical path from the second metrics server to one of the plurality of clients outside the intranet;

wherein the performance metrics generated by the second metrics server is for a predetermined measurement time interval using the measured network traffic for the at least one second connection;

wherein the first metrics server distributes performance metrics generated by the first metrics server to the second metrics server in the intranet;

wherein the second metrics server distributes performance metrics generated by the second metrics server to the first metrics server in the intranet; and

(i) *wherein the distributed performance metrics includes only the performance metrics generated by the first metrics server and the second metrics server that are different from any previously distributed performance metrics by the first metrics server and the second metrics server as recited in claim 9, or*

(ii) *wherein the predetermined periodic basis is one minute after performance metrics have been generated by the first and second metrics servers as recited in claim 10.*

(f) A method of providing network performance metrics using an intranet, the intranet having at least one server, the method comprising:

non-intrusively measuring network traffic between at least one server in an intranet and at least one client outside the intranet, the intranet being a network accessible only by authorized users;

generating performance metrics from the network traffic measured between the at least one server and the at least one client within a predetermined measurement time interval;

wherein the non-intrusive measurement of network traffic and the generation of performance metrics are performed by the at least one server;

wherein the non-intrusive measurement of network traffic includes copying packets being transferred between the at least one client and the at least one server to a memory buffer of the at least one server,

further comprising intrusively measuring network traffic between the at least one server and the at least one client in an intranet;

wherein the intrusive measurement of network traffic includes injecting and monitoring probing packets that are transferred between the at least one server and the at least one client outside the intranet; and

further comprising distributing performance metrics generated by the at least one server to another at least one server inside the intranet, as recited claim 11.

(g) A method of providing network performance metrics using an intranet, the intranet having at least one server, the method comprising:

examining packets being transferred during a plurality of connections, such that each connection of the plurality of connections is a logical path between at least one server in the intranet and at least one client outside the intranet, the intranet being a network accessible by authorized users;

generating performance metrics from the examined packets for the plurality of connections upon the expiration of a predetermined measurement time interval;

accumulating performance metrics from the generated performance metrics for the plurality of connections for each of the plurality of connections that remain active beyond the predetermined measurement time interval;

creating a record for each connection of the plurality of connections that are active during a predetermined measurement time interval; and

deleting each created record corresponding to each connection of the plurality of connections that becomes inactive when the predetermined measurement time interval expires, as recited in claim 12.

(h) A measurement infrastructure comprising:

a plurality of clients outside an intranet, the intranet being a network accessible only by authorized users;

a first metrics server inside the intranet coupled to the plurality of clients and configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured;

further comprising a second metrics server that is configured to non-intrusively measure network traffic being transferred in and out of the intranet and to generate performance metrics based on the network traffic measured, and

the first metrics server distributes performance metrics generated by the first metrics server to the second metrics server and

the second metrics server distributes performance metrics generated by the second metrics server to the first metrics server as recited in claims 15 and 17.

(i) A method of providing network performance metrics by a plurality of servers in an intranet being accessible only by authorized users, the method comprising:

non-intrusively measuring, by a first server in the intranet, network traffic between the first server and at least one client outside the intranet;

generating performance metrics, by the first server, from the network traffic measured between first server and the at least one client within a predetermined measurement time interval;

intrusively measuring network traffic between the first server and the at least one client outside the intranet, the intrusive measurement including injecting and monitoring probing packets that are transferred between the first server and the at least one client outside the intranet; and

distributing performance metrics generated by the first server to a second server inside the intranet as recited in claim 16.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

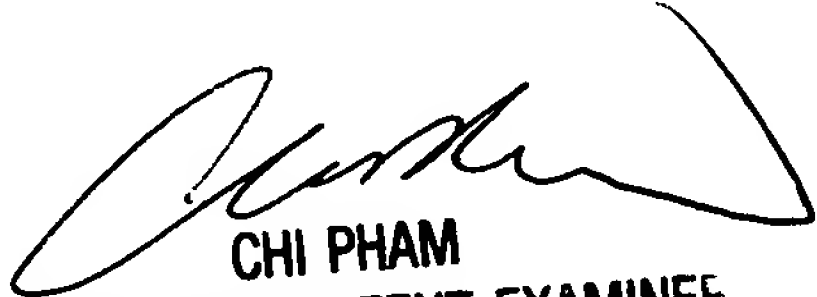
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-18:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
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